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Beach Renourishment to protect Ft. Massachusetts

Mobile, Ala. - The US Park Service and the US Army Corps of Engineers have just completed a beach renourishment project at West Ship Island to protect Ft.

Massachusetts from erosion. The beach on much of the north face of the fort had eroded away completely leaving the fort unprotected against wave action. The Fort had water against the lower portion of much of the north wall at all times.

This project was a temporary measure to protect the walls of the fort from being damaged due to the wave action. The protection of Ft. Massachusetts is an ongoing project with material placed around the fort by the Corps in 1996, 1991 and 1983. In 1969, Hurricane Camille's 200 mile per hour winds and 30 foot tide cut Ship Island in two, creating East and West Ship Islands.

"The struggle to save the fort has been going on for a long time. This was one of the reasons the Park was designed", said Jerry Eubanks of the US Park Service. "The legislation that established the Gulf Coast National Seashore mandated that the US Park Service protect Ft. Massachusetts, "he said.

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The Park Service looked at several ways to stabilize the beach but found nothing that works better than renourishment. The problems with other solutions are cost to build and maintain and aesthetics.

This project, with an advertised cost of \$272,000, was designed by Dr. Greg Stone, a coastal engineer from Louisiana State University. The wave action is constantly moving the sand in an east-west fashion. This has been observed, measured and monitored for the last 10 years. "In the past, sand was put around the Fort and moved away quickly to the west," said Dr. Stone.

This project extends the feeder beach all the way east of the lighthouse, then as sand is eroded from the feeder beach it will feed the beach in front of the fort. "Hopefully this will provide a longer interval between renourisments," he said.

In addition to the normal east-west sand migration, rubble on the beach east of Fort Washington was trapping the sand, thus starving the beach further west, nearer the Fort, making the problem even worse. As part of the project, the rubble was removed, giving the sand an uninterrupted path westward.

The sand the Corps placed on the beach was gathered west of Ship Island in that portion of the channel that was realigned under the deepening contract completed in December of 1992. At one time this same sand was on the beach on both the sound side and the gulf side of Ship Island. Thus the sand is a nice white color like the native sand. This sand will also rejuvenate the Dunes in the area.

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The Dredge George D Williams (30' pipeline dredge) owned by Weeks Marine, Inc., began dredging on Thursday, May 2, and placed 115,000 cubic yards of sand on the beach around the base of the Fort and extending eastward by the time the project was completed on Tuesday, May 7.

Fort Massachusetts was built by the US Army Corps of Engineers from 1859 to 1866 as part of an extended system of masonry forts for coastal defense. During that time, inclement weather, the Civil War and isolation were a few of the many challenges the Corps faced. Ship Island was considered important to the defense of New Orleans and the Gulf Coast because of its deep water harbor and location along a shipping route. The fort's masonry work is impressive. The concrete foundation extends more than nine feet below sea level. Although several million bricks were used in its construction, the fort contains more concrete than brick. Fort Massachusetts was one of the last masonry coastal fortifications to be built in the US. Although the fort became a victim of advancing military technology, its beauty and craftsmanship remain as symbols of a strong, yet passive coastal defense.

In 1862 Ship Island served as the base from which Admiral David Farragut's fleet sailed to attack and capture New Orleans. The Island also became a prison for Confederate P.O.W.'s, and a base for the U.S. Second Regiment (Louisiana Native Guards), one of the first African American combat units to fight in the Civil War.

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Ship Island is a favorite getaway for both the nature lover and the history buff. Protected by the National Park Service, the unspoiled island is home to an interesting variety of plants and wildlife, including many species of migratory birds. Warm tidal pools and wind shaped sand dunes crowned with sea oats help the island retain much of its natural beauty.

Erosion is a natural occurrence and the winter storms will continue to move the sand across the island, eroding it, and changing the landscape, so the Park Service will be studying the effects of this renourishment to help design future projects. This project was a collaborative effort between the scientific community, US Park Service, and the US Army Corps of Engineers.

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